State of California

Public Utilities Commission
San Francisco

M E M O R A N D U M

Date : September 30, 2003

To : The Commission
(Meeting of October 2, 2003)

From : Helen Mickiewicz, Deputy General Counsel
Sindy Yun, P. U. Counsel III SY | SMW

Subject : Specialized Overlay Proposal Prepared by the Telecommunications Division and the Legal Division

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Exactly one year ago, on September 26, 2002, the CPUC filed with the Federal Communications Commission (FCC) a proposal to establish two specialized overlays (SOs) covering the 310 and the 909 area codes, as well as other area codes. In March of this year, the CPUC decided to withdraw that SO proposal. The President's office has requested that staff prepare a new SO proposal. This memo provides a summary of the new proposal prepared by the Telecommunications Division and the Legal Division. Discussed below are the types of services that would be included in the SOs, the geographic demarcation of the SOs, take-back of numbers, ten-digit dialing and the advantages and the disadvantages of the proposal. The memo also provides a summary of the SO petition that the CPUC previously filed with the FCC in September, 2002, as well as the current status of the 310 and the 909 area codes.

Background:

In March 2002, the FCC issued the *Third Report and Order* in its ongoing Numbering Resources Optimization docket, CC Docket 99-200. In the *Third R&O*, the FCC eliminated its blanket prohibition against state implementation of a specialized overlay (SO), and instead, elected to address state requests to implement an SO on a case-by-case basis. The FCC's order also set forth the criteria a state seeking such authority must address in a petition for such authority.

The CPUC's Numbering Team spent many months in discussions with industry representatives, attempting to craft an SO proposal that would comply with state law and CPUC precedents, which favor splits, but also would meet industry concerns, the public's

concerns, and the FCC's criteria. On September 27, 2002, the CPUC filed a petition with the FCC seeking authority to implement two specialized overlays in Southern California. The provisions of the two proposals were identical, except that they addressed different area codes. The provisions were as follows:

- The proposal for the 310 would create an SO that would cover the 213, the 310, the 323, and the 562 area codes;
- The proposal for the 909 would create an SO that would cover the 714, 909, and 949 area codes;
- Each of the SOs would include on a prospective basis numbers assigned to wireless carriers, numbers assigned for data purposes, and numbers assigned on a "non-geographic basis".
- Each of the SOs would last for a period of two years from the date each is created.
- Each of the SOs would require 10-digit dialing between the SO and the underlying existing area codes, but customers would retain 7-digit dialing within each of the affected area codes, including the SOs.
- Existing wireless customers in only the 310 and the 909 area codes would be required to take a change of area code but would retain their existing 7-digit telephone numbers.

In the meantime, the wireless industry launched a sizeable public campaign, in California, before the FCC, and on Capitol Hill, intended to discredit the CPUC's SO petition because of the proposal to require an area code change for existing wireless customers in the 310 and 909 area codes. For a number of reasons, including the wireless industry's outcry against the SO petition as well as the existing number situation in the 310 and the 909 area codes, the CPUC withdrew its petition on March 14, 2003.

Statutory Requirements:

As furor over the proliferation of area codes in California mounted, the Legislature enacted several new provisions of the relevant statute governing the opening of new area codes. (See Section 7930 et seq of the Public Utilities Code.) Among the provisions was a requirement that the CPUC seek from the FCC authority "to order telephone corporations to assign telephone numbers dedicated to wireless and data usage to a separate area code and to permit seven digit dialing within that technology-specific area code and the underlying preexisting area code or codes." (P.U. Code § 7943(b).) The CPUC has made such a request twice: first, in April 1999, before the statute was enacted, the CPUC filed a petition with the FCC for authority to implement technology-specific

overlay, and second, in September 2002, the CPUC filed the SO petition, discussed above. The FCC's response to the first petition was to seek additional comment on the question and ultimately, to issue the *Third R&O*, again, discussed above.

Section 7943 explains what the CPUC should do if the FCC grants the authority requested. The statute, however, is silent on what the CPUC should do if the FCC fails to act or denies the requested authority.

Recommendation:

In order to determine whether the CPUC should file a petition to the FCC for authority to implement the SOs in California, the Telecommunications Division and the Legal Division recommend that the Commission consider the following key factors:

1) The SO proposal would provide long-term benefits, such as more efficient use of numbers and extending the life of an area code, if the SOs include all or a majority of the transparent or non-geographic based numbers described below;

2) Costs to implement the SOs would be substantial;

3) The industry has informed TD staff informally that implementation of the SOs pose a number of significant technical difficulties; and

4) The industry recommends that the Commission institute a formal proceeding to look into the SO proposal more closely. Carriers recommend that the CPUC obtain input from the industry on technical feasibility, costs, and other challenges associated with the implementation of the SOs before filing the SO petition with the FCC.

Discussion of the SO Proposal:

A specialized overlay (SO) is a new area code with specific types of numbers, which is implemented over the same geographic area as one or more area codes. An overlay offers the advantage that existing customers need not take an area code change. However, pursuant to both an FCC rule and a CPUC rule, all customers in the geographic area covered by the overlay must dial 10 digits for every call.

1. Types of Services:

The proposed overlay would include numbers assigned for data purposes, numbers assigned on a "non-geographic basis" (except for cellular services) and transparent numbers. The SO may also include Internet Telephony/Voice Over Internet Protocol , Global Positioning Service for Vehicles such as OnStar, Fax over the Internet such as E-Fax, and Dial – Up Numbers for Internet Service Providers (ISPs) such as America On

Line (AOL), paging services, fax machines and modems. For fax machines and modems, only those business customers with 50 or more access lines would be included in the SOs. Residential customers' fax machines and modems would not be included in the SOs.

2. Location/Geographic Demarcation:

Based on technical feasibility, TD recommends that two SOs be implemented in California as follows:

> One overlay area code for Northern CA (such as 530, 707, 415, 510, 925, 650, 408, 831, 209, 916) and one overlay area code for Southern CA (such as 760, 559, 661, 805, 619, 858, 818, 213, 310, 323, 562, 626, 714, 949, 909)

The SO will mimic the rate centers of the underlying area codes. CA has 738 rate centers in its 25 area codes. Each competitive local carriers (CLECs) and incumbent local carrier (ILECs) which has business customers in a particular rate center will need a thousands block in each rate center where IT operates. Some cellular carriers which provide global positioning services for vehicles will also need a thousands block in rate centers in which they operate. Assuming all CLECs, all ILECs and 50% of the cellular carriers need a block in each rate center in which they operate, staff has determined that two overlay codes over all of California are needed.

3. Take-back of Numbers:

The FCC has never defined a "take-back" of telephone numbers, although historically, the industry and the FCC have considered a "take-back" to refer to a required 7-digit number change for a customer or group of customers. In the SO proposal, we will ask for authority to be able to assign all numbers on a prospective basis as well as take back numbers on a retroactive basis. If authority is granted from the FCC, prospective only or retroactive take-backs, will be determined after determination of technical feasibility.

4. Ten-Digit Dialing:

The SO petition will request a waiver of the FCC's 10-digit dialing requirement. We propose that there be no mandatory 10-digit dialing within the SO and the underlying area codes.

5. Advantages of the Proposed SOs:

1. Over the long-term, the SOs should extend the lives of all area codes in California. As we have seen with the cellular industry, these non-geographic services are to a great extent responsible for speeding up area code exhaust. By placing these other numbers for non-voice services, non-geographic services and transparent numbers into an SO, these

numbers will not contribute to the exhaust of current area codes.

2. Assuming that the SOs help to stave off area code exhaust, the typical customer disruption which occurs with an area code change will also be delayed.

6. Disadvantages of the proposed SOs:

1. The SOs will not save the 310 or 909 area codes from an area code change because
   - No numbers will be reclaimed from these two area codes for the SO;
   - The FCC may not rule on the petition before these area codes exhaust.
2. The proposal will result in increased cost for carriers
   - The network cannot distinguish the nature of any calls going over a voice-grade circuit. The network does not distinguish between a voice call using the regular Network or a call only passing data such as internet telephony or fax machines;
   - Therefore this proposal would require carriers to implement new number assignment protocols;
   - Increased costs to the carriers would result from their having to ask additional questions when a business customer signs up for service to determine how many numbers are needed for faxes and modems and how many numbers are used for regular telephone service; and
   - The carriers will have to hire new work force.
3. The proposal will increase costs to businesses with 50 or more lines to track and set aside certain numbers to be used for specific purposes.
4. We expect that Voice Over IP providers will claim that the proposal discriminates against them as voice service providers. We expect heavy lobbying at the FCC from businesses anticipating that they will be adversely affected by this proposal.
5. The FCC may not approve of our proposal to continue with 7-digit dialing. The FCC requires 10-digit dialing for overlays. We would be asking for a waiver of this requirement, which the FCC has successfully defended in the Second Circuit Court of Appeals and is reluctant to waive.
6. The proposal creates the potential for many numbers to be stranded. .
7. The FCC generally requires that an SO be transitional, although it has indicated that it would entertain a proposal for a permanent SO dedicated to non-geographic numbers. We would be asking for a waiver of this requirement.
8. OnStar claims that it is geographically based and thus, opposes being included in the SOs. If a vehicle is only serviced for emergency services, then OnStar uses a 500 number, not a single telephone number. However, for their other services, they include cellular phone capabilities, and thus they are identical to traditional cellular services.

9. There are many types of VoIP, and the petition may need to differentiate the various types of VoIP. For example, third generation cellular technology is based on internet protocol.

10. Carriers currently do not track their numbers by the types of uses such as these proposed in the petition. There is no incentive for business customers to volunteer the information.

11. There may be porting issues. For example, if a VoIP customer wants to port his/her VOIP telephone number to regular telephone service, there may be technical problems associated with the porting effort.

12. For each new NPA, there need to be three trunk groups (911, TOPs, AIS). These trunk groups are needed at each switch, which would require additional equipment. There may be capacity issues when talking about 12 NPAs in one switch.*

13. Implementation of the SOs would be a huge undertaking. Carriers with whom TD staff discussed the proposal could not even give a timeline for the implementation. It may take up to six months just to flesh out all the technicalities. Then it would take over a year to implement the SO, and implementation would involve a considerable amount of 911 testing.

14. An overlay of 12+ area codes has not been done. There has not been an overlay crossing LATA boundaries, so unanticipated technical constraints may arise as well.*

15. A whole host of databases would be affected: STP, billing, provisioning, and ordering. It would be a massive information technology process.

16. Pooling is done on the Local Number Portability (LNP) platform. There could be capacity issues on the LNP database.*

17. Carriers stress that there are a lot of questions about feasibility of such an undertaking. They also stress that since this SO will not alleviate the need for a split or overlay of the 310 and 909 area codes, there should not be a sense of urgency.

* Having more than two overlays may alleviate issues regarding capacity constraints. However, we would have to balance that against accelerating exhaust of the North American Numbering Plan.

What is the current status of the 310 area code?

In April 1999, 10-digit dialing began in the 310 area code in preparation for opening the new overlay. The subsequent uproar persuaded the CPUC to suspend the 310 overlay and to pursue number conservation measures both through CPUC decisions and through efforts to obtain additional regulatory authority from the FCC, which has plenary jurisdiction over numbering pursuant to the 1996 Federal Telecommunications Act. Those efforts have produced a significant public policy success story, with California able to forestall opening any new area codes since 1999. Unfortunately, the industry's need

for telephone numbers, while reduced by current economic conditions and consolidations among industry players, remains strong, particularly among wireless service providers.

The proposed "back-up" plan for the 310 NPA, which would split the 310 into two area codes upon implementation, is on the agenda for the Commission's October 16, 2003 meeting.

What is the current status of the 909 area code?

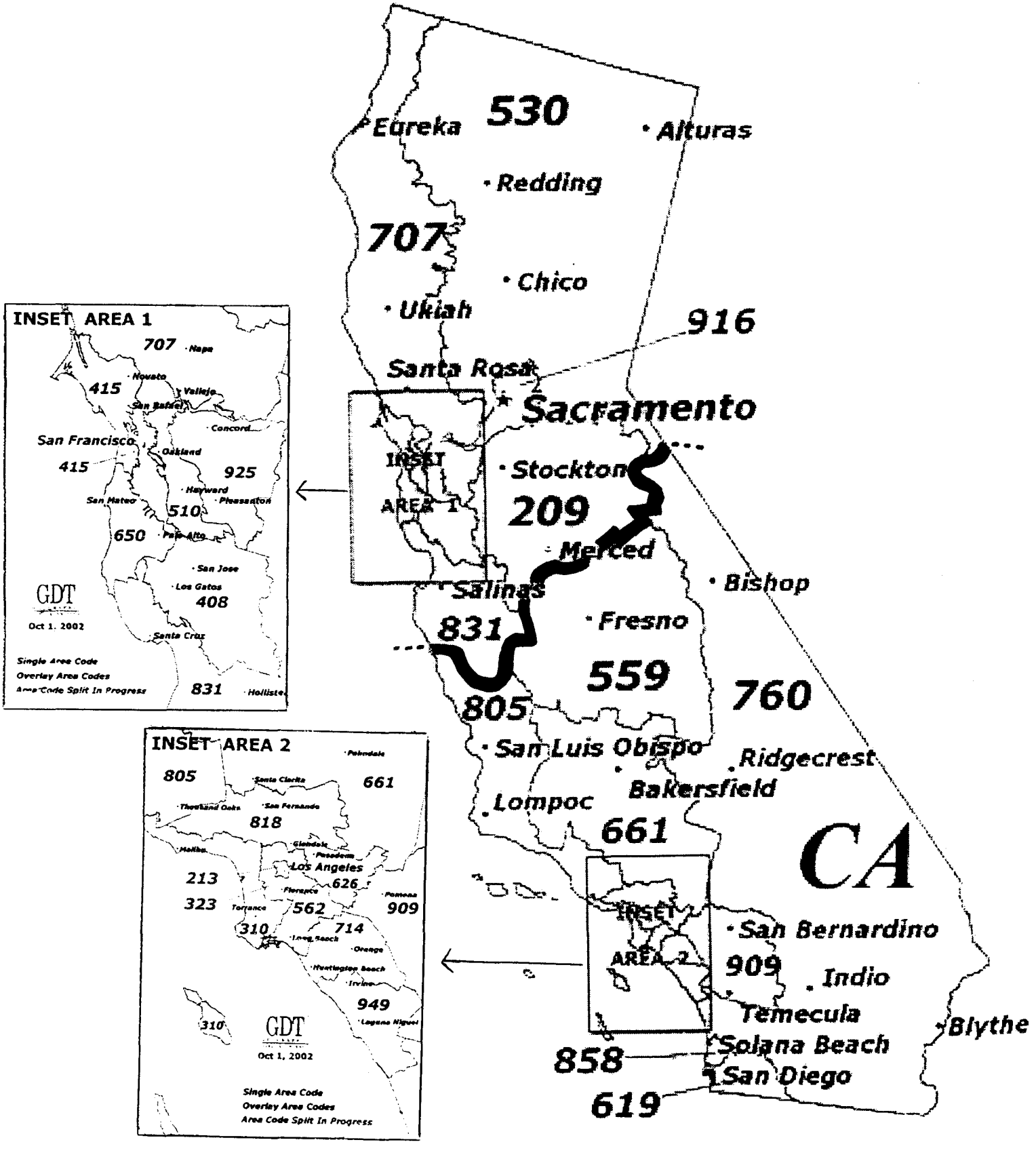
On a separate track, the 909 area code was slated to be split and then receive an overlay in a two-step plan to provide additional numbers in that area code. Again, because the CPUC decided to hold off on implementing any new area codes until, a) the need for a new area code could clearly be demonstrated and b) all conservation measures had been implemented, the plan to open new area codes in 909 was suspended. The Commission has not yet adopted a back-up plan for the 909 area code.

Assigned staff: Helen Mickiewicz and Sindy Yun- Legal Division (HMM, 3-1319 and SJY 3-1999); Cherrie Conner, Sue Wong and Robert Benjamin - Telecommunications Division (CHR, 3-2767, SKW, 3-2308, and BKB, 3-1069).

SJY:sam

Attachment

California Area Codes



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Estimated NXXs Needed In Each Specialized Overlay

NPA	North	South
209 Total	70	0
213 Total	0	12
310 Total	0	39
323 Total	0	31
408 Total	23	0
415 Total	24	0
424 Total	0	0
510 Total	27	0
530 Total	137	0
559 Total	0	65
562 Total	0	27
619 Total	0	22
626 Total	0	25
650 Total	32	0
661 Total	0	37
707 Total	84	0
714 Total	0	29
760 Total	0	96
805 Total	0	54
818 Total	0	30
831 Total	28	0
858 Total	0	18
909 Total	0	58
916 Total	26	0
925 Total	50	0
Grand Total	501	543
		1044